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Town Copy

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Department of Human Services
Division of Health Engineering, 10 SHS
(207) 287-5672 Fax: (207) 287-3165

PROPERTY LOCATION

City, Town, or Plantation	LAMOINE
Street or Road	TWYNHAM LANE
Subdivision, Lot #	

>> CAUTION: LPI APPROVAL REQUIRED <<

Town/City LAMOINE Permit # 1836

Date Permit Issued 6/13/17 Fee: $250 PD Double Fee Charged ☐

Local Plumbing Inspector Signature L.P.I. # 1040

☐ Owner ☐ Town ☐ State

OWNER/APPLICANT INFORMATION

Name (last, first, MI) HISLER, WILL ■ Owner ☐ Applicant

Mailing Address of Owner/Applicant	36 TWYNHAM LANE LAMOINE, ME 04605
Daytime Tel. #	207-479-5543

The Subsurface Wastewater Disposal System shall not be installed until a Permit is issued by the Local Plumbing Inspector. This Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.

Municipal Tax Map # 9 Lot # 15

OWNER OR APPLICANT STATEMENT

I state and acknowledge that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a Permit.

Signature of Owner or Applicant 5/12/17 Date

CAUTION: INSPECTION REQUIRED

I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.

Local Plumbing Inspector Signature (1st) date approved (2nd) date approved

PERMIT INFORMATION

TYPE OF APPLICATION

■ 1. First Time System
☐ 2. Replacement System
Type replaced: _____
Year installed: _____
☐ 3. Expanded System
☐ a. <25% Expansion
☐ b. >= 25% Expansion
☐ 4. Experimental System
☐ 5. Seasonal Conversion

THIS APPLICATION REQUIRES

■ 1. No Rule Variance
☐ 2. First Time System Variance
☐ a. Local Plumbing Inspector Approval
☐ b. State & Local Plumbing Inspector
☐ 3. Replacement System Variance
☐ a. Local Plumbing Inspector Approval
☐ b. State & Local Plumbing Inspector
☐ 4. Minimum Lot Size Variance
☐ 5. Seasonal Conversion Permit

DISPOSAL SYSTEM COMPONENTS

■ 1. Complete Non-engineered System
☐ 2. Primitive System (graywater & alt. toilet)
☐ 3. Alternative Toilet, specify: _____
☐ 4. Non-engineered Treatment Tank (only)
☐ 5. Holding Tank, _____ gallons
☐ 6. Non-engineered Disposal Field (only)
☐ 7. Separated Laundry System
☐ 8. Complete Engineered System (2000 gpd or more)
☐ 9. Engineered Treatment Tank (only)
☐ 10. Engineered Disposal Field (only)
☐ 11. Pre-treatment, specify: _____
☐ 12. Miscellaneous Components

SIZE OF PROPERTY

±1 ☐ SQ. FT. ■ ACRES

SHORELAND ZONING

☐ Yes ■ No

DISPOSAL SYSTEM TO SERVE

■ 1. Single Family Dwelling Unit, No. of Bedrooms: 3
☐ 2. Multiple Family Dwelling, No. of Units: ____
☐ 3. Other: _____ (specify)
Current Use ☐ Seasonal ☐ Year Round ■ Undeveloped

TYPE OF WATER SUPPLY

■ 1. Drilled Well ☐ 2. Dug Well ☐ 3. Private
☐ 4. Public ☐ 5. Other PROPOSED

DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

TREATMENT TANK

■ 1. Concrete
■ a. Regular
☐ b. Low Profile
☐ 2. Plastic
☐ 3. Other: _____
CAPACITY: 1,000 GAL

DISPOSAL FIELD TYPE & SIZE

☐ 1. Stone Bed ☐ 2. Stone Trench
■ 3. Proprietary Device
☐ a. cluster array ■ c. Linear
■ b. regular load ☐ d. H-20 load
☐ 4. Other: _____
SIZE: 900 ■ sq. ft. ☐ lin. ft.

GARBAGE DISPOSAL UNIT

■ 1. No ☐ 2. Yes ☐ 3. Maybe
If Yes or Maybe, specify one below:
☐ a. multi-compartment tank
☐ b. ___ tanks in series
☐ c. increase in tank capacity
☐ d. Filter on Tank Outlet

DESIGN FLOW

270 gallons per day
BASED ON:
■ 1. Table 4A (dwelling unit(s))
☐ 2. Table 4C (other facilities)
SHOW CALCULATIONS
— for other facilities —
☐ 3. Section 4G (meter readings)
ATTACH WATER METER DATA

SOIL DATA

PROFILE 3 CONDITION C
at Observation Hole # TP16-1
Depth 18 "
of Most Limiting Soil Factor
RESTRICTIVE

DISPOSAL FIELD SIZING

☐ 1. Medium---2.6 sq. ft. / gpd
■ 2. Medium---Large 3.3 sq. f.t / gpd
☐ 3. Large---4.1 sq. ft. / gpd
☐ 4. Extra Large---5.0 sq. ft. / gpd

EFFLUENT/EJECTOR PUMP

☐ 1. Not Required
■ 2. May Be Required
☐ 3. Required
Specify only for engineered systems:
DOSE: _____ gallons

LATITUDE AND LONGITUDE
at center of disposal area
Lat. 44 d 31 m 07.937 s
Lon. 68 d 22 m 30.451 s
if g.p.s. state margin of error: 20'

SITE EVALUATOR STATEMENT

I certify that on 10.14.2016 (date) I completed a site evaluation on this property and state that the data reported are accurate and that the proposed system is in compliance with the State of Maine Subsurface Wastewater Disposal Rules (10-144A CMR 241).

Site Evaluator Signature	SE #	Date
	SE#360	10/14/16

Site Evaluator Name Printed	Telephone Number	Email Address
ROGER ST.AMAND	207-944-7288	ROGER@ARC-ENV.COM

Designed with SeptiCAD v3

Note: Changes to or deviations from the design should be confirmed with the Site Evaluator.

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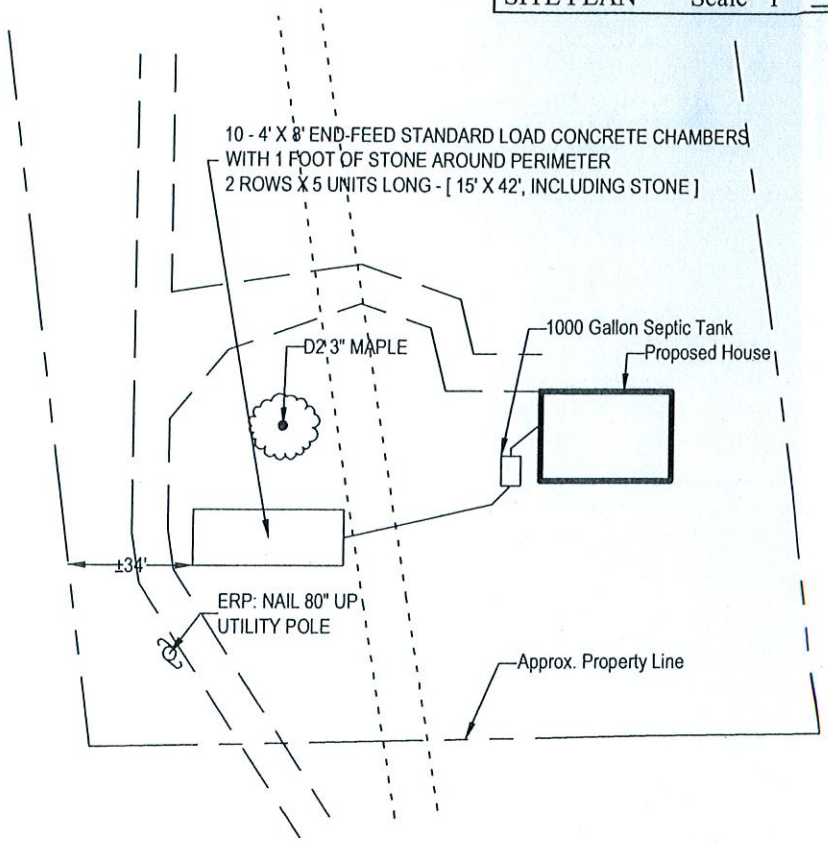
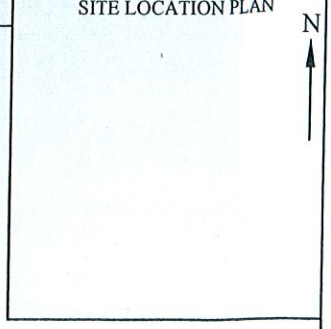
LAMOINE	TWYNHAM LANE	WILL HISLER

SITE PLAN Scale 1" = 50 ft.



SITE LOCATION PLAN



NOTES:
1. THIS IS NOT A SURVEY. ALL PROPERTY LINES, BUILDING LOCATIONS AND SITE FEATURES HAVE BEEN APPROXIMATELY LOCATED, UNLESS OTHERWISE SHOWN.
2. SEPTIC TANK AND DISPOSAL FIELD MUST BE LOCATED AT LEAST 8' AND 20' FROM A FULL FOUNDATION, RESPECTIVELY.
3. SEPTIC TANK AND DISPOSAL FIELD MUST BE LOCATED AT LEAST 8' AND 15' FROM A NON-FULL FOUNDATION, RESPECTIVELY.

SOIL PROFILE DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole # TP16-1 ■ Test Pit ☐ Boring

3 " Depth of organic horizon above mineral soil

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Mottling
0–6	SANDY LOAM	FRIABLE	DARK GRAYISH BROWN	
6–12	GRAVELLY SANDY LOAM	FRIABLE	STRONG BROWN	
12–18				
18–24				
24–30	SANDY LOAM	FIRM	DARK YELLOWISH BROWN	
30–36				
36–42	REFUSAL (FIRM) AT 38 INCHES			
42–48				

Soil Profile	Classification Condition	Slope Percent	Limiting Factor Depth	☐ Groundwater ■ Restrictive Layer ☐ Bedrock
3	C	8	18"	

Observation Hole # TP16-1 ■ Test Pit ☐ Boring

2 " Depth of organic horizon above mineral soil

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Mottling
0–6	SANDY LOAM	FRIABLE	DARK BROWN	
6–12	GRAVELLY SANDY LOAM	FRIABLE	STRONG BROWN	
12–18				
18–24				
24–30	SANDY LOAM	FIRM	DARK YELLOWISH BROWN	
30–36				
36–42	REFUSAL (FIRM) AT 38 INCHE		OLIVE BROWN	
42–48				

Soil Profile	Classification Condition	Slope Percent	Limiting Factor Depth	☐ Groundwater ■ Restrictive Layer ☐ Bedrock
3	C	8	22"	

Roger St Pierre
Site Evaluator Signature

SE#360
SE #

10/14/16
Date

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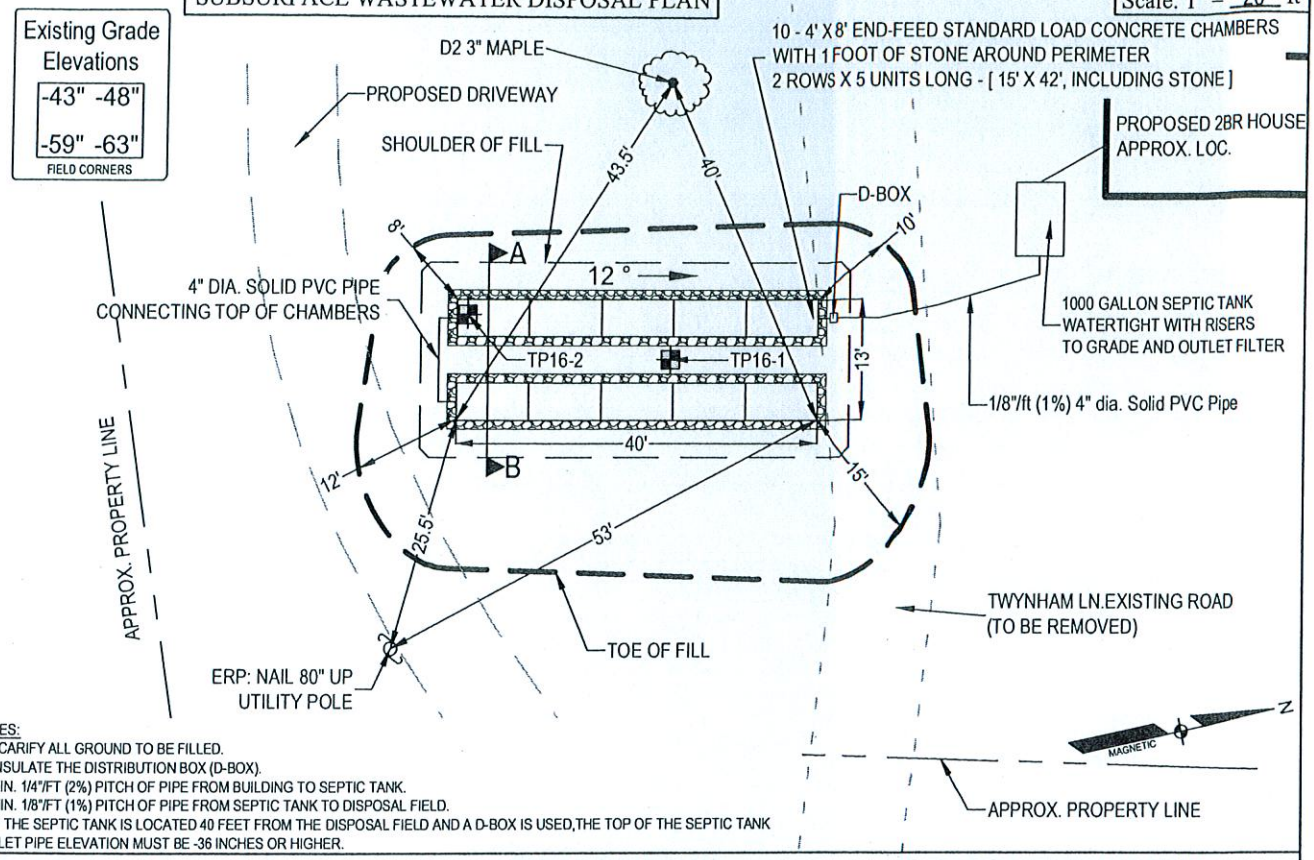
SUBSURFACE WASTEWATER DISPOSAL PLAN

Scale: 1" = 20 ft



NOTES:
1. SCARIFY ALL GROUND TO BE FILLED.
2. INSULATE THE DISTRIBUTION BOX (D-BOX).
3. MIN. 1/4"/FT (2%) PITCH OF PIPE FROM BUILDING TO SEPTIC TANK.
4. MIN. 1/8"/FT (1%) PITCH OF PIPE FROM SEPTIC TANK TO DISPOSAL FIELD.
5. IF THE SEPTIC TANK IS LOCATED 40 FEET FROM THE DISPOSAL FIELD AND A D-BOX IS USED, THE TOP OF THE SEPTIC TANK OUTLET PIPE ELEVATION MUST BE -36 INCHES OR HIGHER.

BACKFILL REQUIREMENTS

Depth of Backfill (upslope) 15" TO 20"
Depth of Backfill (downslope) 22" TO 26"

CONSTRUCTION ELEVATIONS

Finished Grade Elevation (at Row 1) -28"
Top of Proprietary Device (at Row 1) -40"
Bottom of Disposal Field (at Row 1) -53"

ELEVATION REFERENCE POINT

Location & Description: NAIL 80" UP UTILITY POLE

Reference Elevation is or: _____

NOTE: BACKFILL MATERIAL PLACED BELOW OR WITHIN 3' OF THE CHAMBERS OR STONE BESIDE CHAMBERS MUST BE GRAVELLY COARSE SAND MEETING SECTION 11(E)(2) OF THE RULES. REMAINING FILL LOAMY SAND (NO CLAY).

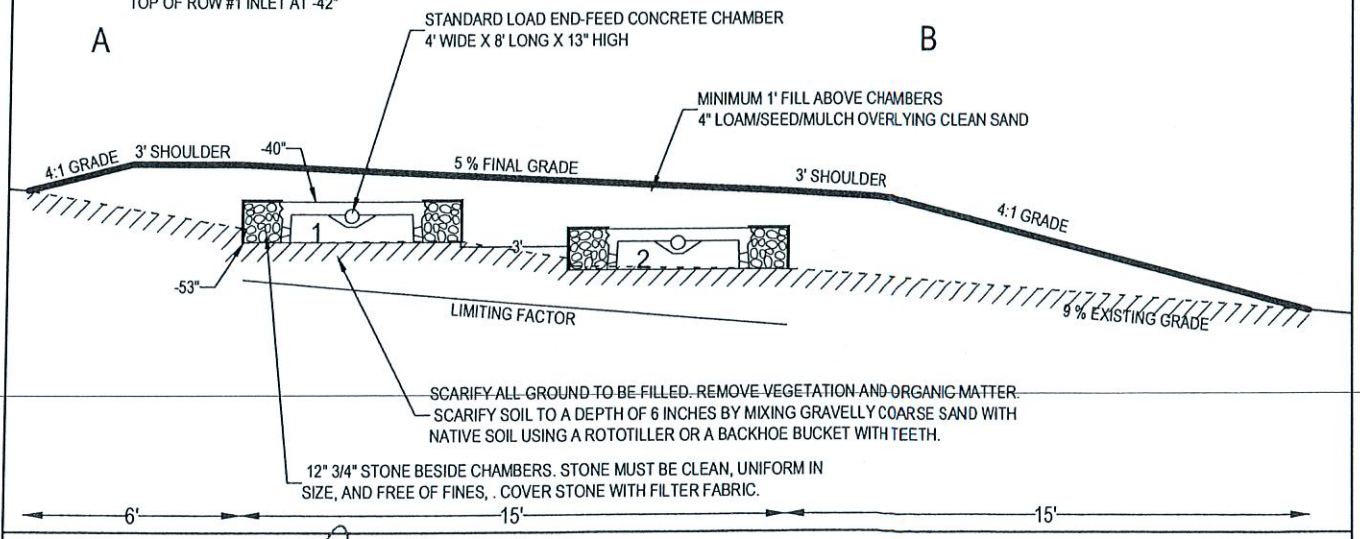
ROW #	1	2
TOP	-40"	-49"
BOTTOM	-53"	-62"

TOP OF ROW #1 INLET AT -42"

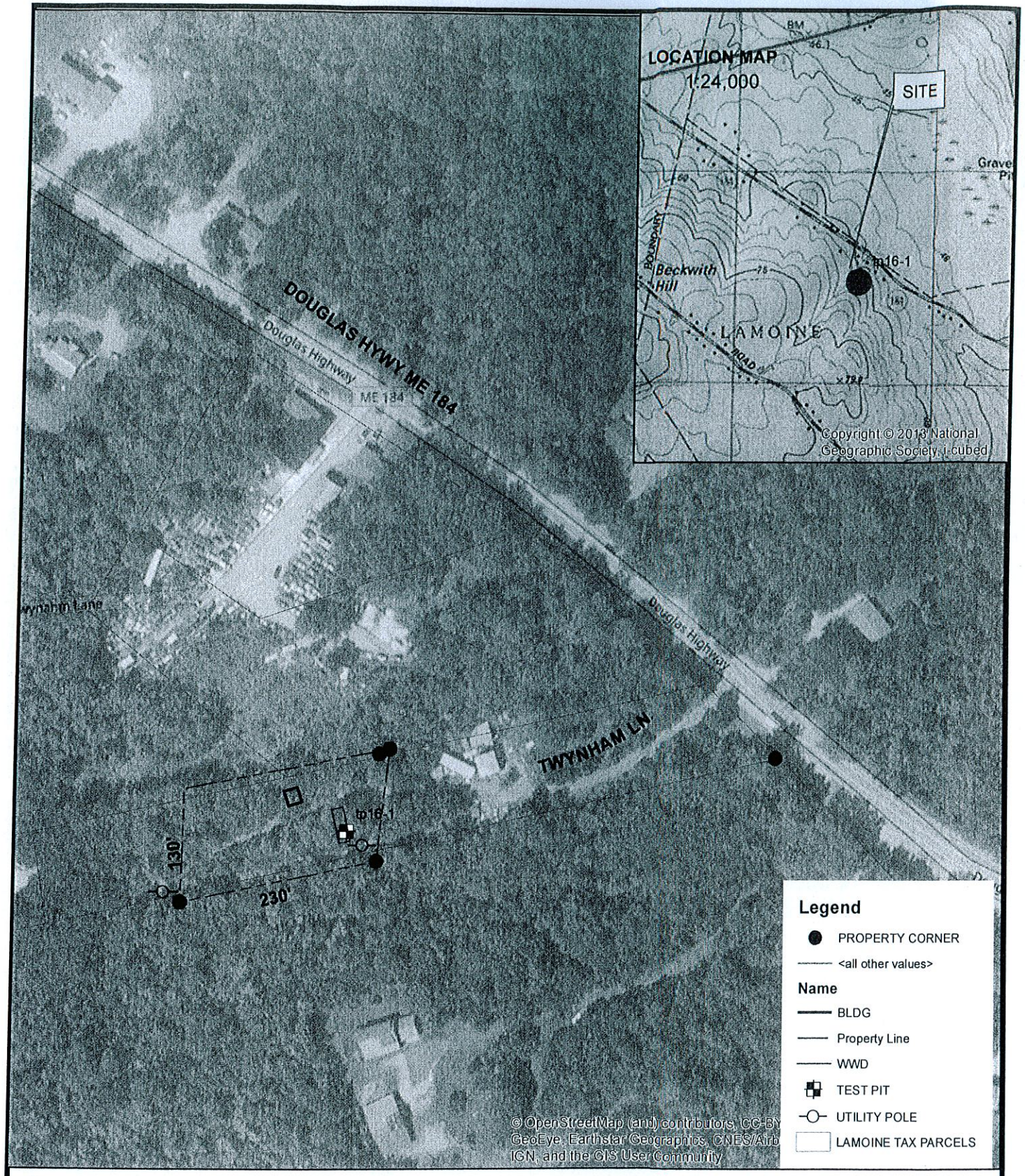
DISPOSAL FIELD CROSS SECTION

APPROXIMATE ABOVE GRADE FILL REQUIRED:
36.6 CUBIC YARDS OF LOAM
89.5 CUBIC YARDS OF SAND
COMPACTION: +20% LOAM & +15% SAND
VOLUME OF CHAMBERS AND STONE NOT CONSIDERED

Scales:
Verticle: 1" = 5
Horizontal: 1" = 5



Site Evaluator Signature	SE#	Date	
Roger St. Pierre	SE#360	10/14/16	Page 3 of 3
	SE #	Date	HHE-200 Rev. 10/02



N

S

ARC
Atlantic Resource Co. LLC

1 inch equals 150 feet

0 75 150 Feet

WILL HISLER PROPERTY
HHE200 LOCATION MAP
DOUIGLAS HYWY
LAMOINE, ME

Created 10.15.2016. by Roger St.Amand, CSS, LSE, PWS, LPF
NOT A LEGAL SURVEY

INSTALLATION MAINTENANCE GUIDELINES
FOR ON-SITE WASTEWATER TREATMENT SYSTEMS

OVERVIEW

This disposal system design (HHE-200) is intended to only represent facts pertinent to State of Maine subsurface wastewater disposal rules, Chapter 241 (Rules). The current version of the Rules is incorporated and made part of this HHE200 design and shall be consulted by the owner or owner's agent if additional information is needed. It shall be the responsibility of the owner or owner's agent to confirm all relevant setbacks and compliance with other applicable Federal, State and municipal rules. All information shown on HHE 200 forms relating to property lines and structures, such as; but not limited to; wells, cellar drains, cesspools, waterlines, septic tanks, utility lines, easements, etc., are based solely on information provided by the owner/owner's agent and should be confirmed prior to construction. These features are noted or not included based on whether or not they affect the disposal system design. It is the responsibility of the owner or owner's agent to confirm before construction begins the information as shown on the design that may affect the installation or operation of the disposal system as designed. If any deviation from design is encountered, contact designer immediately and cease all construction activities. The owner/applicant must investigate whether or not any additional requirements are needed (zoning, minimum lots sizes, municipal setbacks, etc.). It is the applicant's responsibility to obtain any local, State or Federal permits required for installation of the system.

To obtain a permit, take three copies of the HHE-200 form and supporting paperwork to the local plumbing inspector. It is recommended that you keep a back-up copy of your permit. If your application requires a variance, this must be submitted and approved before a permit can be issued.

HOW YOUR SEPTIC SYSTEM WORKS

An on-site wastewater disposal system is a complex physical, biological treatment system and depends on living organisms to function properly. The system will only function properly if it is designed, installed, and maintained correctly. Toxic or hazardous material can, in effect "kill" the system, as well as pollute local groundwater sources. Restricted chemicals and toxic substances like paint, thinner, photo developing solutions, non-biodegradable materials, and cooking greases must not be disposed in the system. NSF approved single ply bath tissues and low phosphorous detergents are recommended. Antibacterial soaps may also adversely affect system performance. Small amount of household cleaners are generally acceptable. Your septic system is designed to treat domestic effluent only. Any other source of water, such as roof runoff, foundation drains, and surface runoff should not enter into the system. The system is designed to treat a specific volume of water on a daily basis. Excess volume can cause premature failure. Some good practices include spacing out laundry loads throughout the week, using low flow fixtures, and fixing leaking fixtures. With proper care and maintenance systems typically last 15 to 20 years. Use of a garbage disposal is not recommended, unless specifically addressed in the HHE 200 form.

OVERVIEW OF A DISPOSAL SYSTEM

A septic system has two basic working parts; a septic tank to hold and pretreat effluent, and a disposal field to treat wastewater.

SEPTIC TANK: Wastewater flows from the house into the tank; here, heavy solids settle and are partially decomposed by anaerobic bacteria to form sludge. Lighter solids and greases float to the top forming a scum layer. The effluent is "pretreated" here in the tank; however, the rate of biological breakdown is slower than the rate of accumulation, resulting in a build-up of sludge in the tank. If solids build up to excessive levels, then they can be carried over into the disposal field. This causes the soil pores and pipes to become clogged and cause the system to fail. A schedule of regularly pumping out the tank sludge every three years or whenever the sludge and scum occupies ⅓ of the tank's liquid capacity is recommended.

DISPOSAL FIELD: Depending on your specific design you may have any one of several types of disposal systems. They all function basically the same by providing a space for water to enter the soil. The partially treated wastewater from the septic tank enters the disposal field and is further purified by aerobic bacteria in a biological layer at the soil interface. The soil then filters out the remaining particles

and excess nutrients. This is the last line of defense against polluted water entering lakes and streams. To maintain your disposal field, avoid compacting the soil above it and do not allow any tree or large vegetation to become established. Underground roots exploit the open channels in the disposal system and can quickly plug up the field; causing premature failure. Avoid gardens and animal pens as well as any vehicular traffic, unless H20 ratings are specifically allowed in application form. It is important to slow erosion and infiltration to maintain vegetative cover, such as grass, over the system and fill area.

1. **General Installation Notes (unless otherwise specified)**
   a. System must be installed according to Maine Subsurface Wastewater Rules: 144A CMR 241 (Rules).
   b. Install all proprietary devices in accordance with manufacturer's recommendations.
   c. Contact designer if any deviation from design is encountered.
   d. Only install systems during suitable weather and moisture conditions.
   e. Do not install during wet weather or below freezing temperatures.
   f. Remove all vegetation and organic matter within system and fill extension area, leaving as much original topsoil as possible.
   g. Remove all trees within 10 feet of system and fill extension area.
   h. Divert any surface water from disposal system area.
   i. Fertilize, seed, and mulch all disturbed soils with (quantities per/1000 SF) 90 Lbs. Lime, 30 Lbs. of 10-10-10 fertilizer (or equivalent manure); seed with 3 Lbs. conservation mix or equivalent, mulch with 1.5 bales hay or straw. Alternatively use minimum of 6 inches of wood bark mulch and landscape as needed.
2. **Setbacks Requirements for residential (<1,000 GPD): Unless Otherwise Noted**
   a. Septic tank:
      i. 100 feet from major water bodies;
      ii. 50 feet from private wells, intermittent streams and minor water bodies;
      iii. 25 feet from all drainage ditches;
      iv. 8 feet from building; and
      v. 10 feet from property lines.
   b. Disposal Area:
      i. 300 feet from public water supply well, or 2,000 gpd usage;
      ii. 100 feet from wells and major water bodies;
      iii. 50 feet from intermittent streams and minor water bodies;
      iv. 25 feet from all drainage ditches;
      v. 15 feet from slab, 20 feet from full foundation; and
      vi. 10 feet from property lines.
3. **Septic Tank Installation**
   a. Use precast concrete watertight tank unless otherwise specified.
   b. Building sewer lines to slope ¼ inch per foot minimum.
   c. Seal all holes and pipe openings to create watertight tank.
   d. Bed septic tank in 6 inches of clean gravel, unless otherwise noted on plans.
   e. Install Outlet filter (Zabel A-100 or equivalent).
   f. Inspection covers and cleanouts to be sealed in areas with high water table.
   g. Record location of covers with swing ties.
   h. Install Risers to grade to assist in maintenance/inspection.
4. **General Disposal Area Installation:**
   a. Disposal area and/or distribution lines are to be level across each row (+/- 1" in 100').
   b. Do not operate wheeled equipment on disposal area or fill extension.
   c. Scarify or rototill disposal area bottom and fill extension along contour, avoid smearing or compacting native soil.
   d. Mix a minimum of 6 inches of fill with native soil if fill is coarser in texture to improve percolation.
   e. All fill beneath and beside system to be coarse sand to gravelly coarse sand as outlined in the Rules.
   f. Fill above system to be sandy loam or coarser.
   g. Minimum of 4 inches of topsoil suitable for establishing vegetative cover.
   h. Finished grade of disposal system area and foot shoulder to be crowned 3%.
   i. Fill extension to be slopes at 25% minimum unless otherwise noted.
   j. Grade surrounding area and upslope to deflect groundwater from system.

k. Distribution boxes (D-Box) to be set level and placed on firm surface with flow equalizers on outlets.
l. Cover D-Box on sides and top with 2 inches high density rigid polystyrene insulation to keep from freezing.

5. Stone and Pipe System

a. Install minimum 12 inches clean, washed stone, uniform in size ¾ to 2½ inches in diameter.
b. All bed area and pipes to be level and installed at design elevation.
c. Cover stone with suitable filter fabric before backfilling system.
d. Effluent pipe to disposal field to slope ⅛ inch per foot minimum.
e. All 90° turns to use 45° or 22.5° degree sweeps.

6. Proprietary Devices

a. Install all proprietary devices as per manufacturer's instructions.
b. Equivalent devices may be substituted if approved by Site Evaluator.

7. Pump Systems

a. Prepackaged pump stations where available:
   i. Pump: contractor to size pump according to lift and run if not otherwise specified; and
   ii. Install check valve and high water alarms in accordance w/ manufacturer's recommended installation.
b. Insulate effluent line and D box with 2" high density rigid polystyrene insulation if cover is less than 5 feet. 2" foam has insulation value of approximately 18 "of earth cover. Maintain a minimum of 12" of cover over effluent line.
c. Install velocity reducer or "Tee" fitting on effluent line outlet in D-Box.

8. Erosion Control Notes

a. All sedimentation and erosion control measures shall be in accordance with the current edition of the MDEP Maine Erosion and Sediment Control BMPS.
b. Silt fence will be inspected, replaced, and/or repaired immediately following any significant rainfall or snow melt or loss of serviceability due to sediment accumulation. At a minimum, all erosion control devices will be observed weekly.
c. During the construction phase, intercepted sediment will be returned to the site and regraded onto open areas.
d. Sediment control devices shall remain in place and be maintained by the contractor until upslope areas are stabilized by a suitable growth of grass. Once a suitable growth has been obtained, all temporary erosion control items shall be removed. Any sediment deposits remaining in place after they are removed shall be dressed to conform to the existing grade; prepared, seeded, and mulched immediately.
e. All disturbed areas will be seeded and mulched.

9. Care and Maintenance Recommendations

a. Avoid any traffic or snow removal over pipes and disposal system unless specifically allowed in the system design.
b. Pump out and inspect septic tank every three years.
c. Minimize water use through low flow fixtures.
d. Use of garbage disposal devices is not recommended. If one is used, increase size of septic tank to next larger size or install a second tank in series.
e. Maintain vegetative cover over system and avoid compaction of topsoil.
f. Remove any woody vegetation that seeds-in within area or fill extensions.
g. Restricting laundry use (two loads/day rather than bunching several loads in one day) is recommended. Washers use large amounts of water and several uses in one day may exceed the design flow of your septic system and cause premature septic system failure.
h. Wipe out oils and grease from cooking pans with paper towels and dispose in the trash. Grease and oils float and may clog the leach field.
i. Do not put feminine napkins or tampons in the septic system.
j. Always use single ply toilet paper with a septic system.
k. Do not use excessive amounts of antibacterial soaps, or household cleansers bleach, etc.; these can kill the natural bacteria in the septic tank and severely reduce the effluent treatment.